

Update on Information Technology Strategic Plan

April Blackburn
Office of Information Systems
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IT Strategic Plan Overview

- FDOT undertook an initiative to develop an
 Enterprise-wide Information Technology Strategic
 Plan and sponsored a critical assessment of the
 Department's information technology capabilities,
 personnel, and infrastructure

IT Strategic Plan

FDOT Mission

The Department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities.

Information Technology Strategic Initiatives

Enterprise Information Technology
Governance

Enterprise Information Management Uniform Information Technology
Standards

Establish effective enterprise governance to develop, maintain and protect FDOT's information assets

Key Tasks

- Develop a program charter defining roles, responsibilities and decision authorities
- Inventory existing governance tools and methods
- Identify gaps in needed governance methods and tools
- Align resources to implement governance structure
- Provide support for enterprise governance implementation / Communicate to ensure interested parties are informed and heard
- Engage in continuous process improvement

Improve decision making with an enterprise view of all financial and non-financial information

Key Tasks

- Develop a program charter defining roles, responsibilities and decision authorities
- Inventory existing information assets and sources
- · Identify met and unmet information needs
- Recommend information architecture framework
- Develop policies, procedures and information architecture framework implementation plan
- Execute implementation plan
- Provide program management, communications, and change management support

Ensure all technology is assessed, developed, deployed, and supported using consistent standards and methodologies

Key Tasks

- Develop a program charter defining roles, responsibilities and decision authorities
- Inventory existing IT standards and protocols (i.e., formal and informal standards)
- Determine additional and enhanced IT standards needed by the Department
- Collaborate across the enterprise to develop, enhance, and formalize IT standards
- Communicate and implement new standards
- Develop and implement process to ensure standards remain current

Support Strategic Initiatives through effective Communications Program, Organizational Change Management, and Project Management

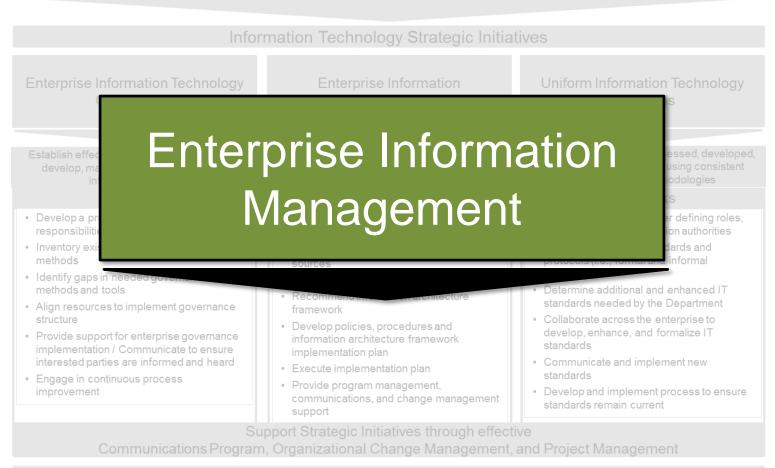
IT Improvement Initiatives

Continue to identify and implement critical OIS initiatives such as mobile technology standards development, systems and enterprise architecture definition and documentation, and enterprise infrastructure documentation.

ROADS Project Overview

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IT Improvement Initiatives

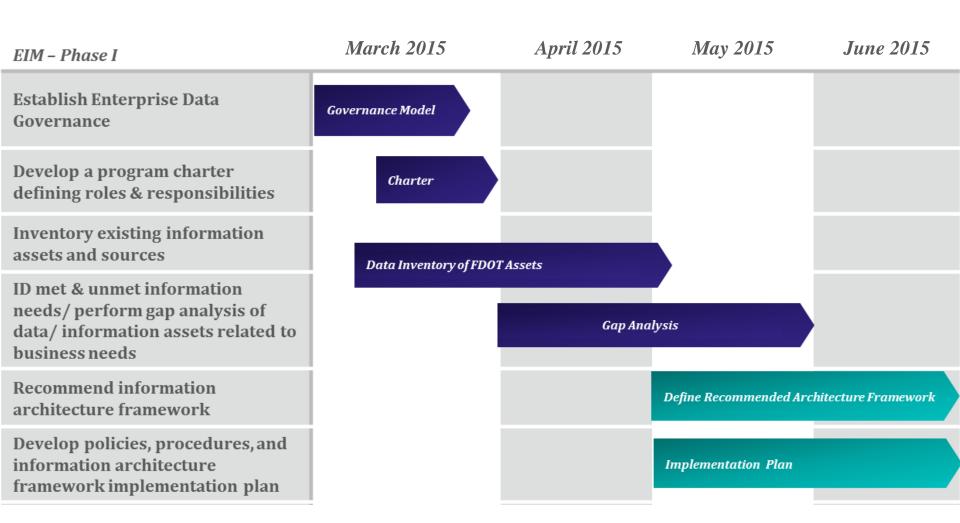
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ROADS Project Overview



In mid-March, the Reliable, Organized, and Accurate Data Sharing (ROADS) Project began. The ROADS Project goal is to improve data reliability and simplify data sharing across FDOT to have readily available and accurate data to make informed decisions.

ROADS Project Phase I Timeline



The Challenge

- The Department does not have a unified approach to how information across the enterprise is managed
- The Department is data rich and information poor

ROADS Project Expected Benefits



Ensure information is secure, accurate, reliable, and at the appropriate level to empower you to do your job better.



Provide the ability to access relevant business data more quickly and efficiently by knowing where to find it.



Reduce the amount of time to locate the data you need and increase the time to analyze the data.



Effectively share information across our organization to enable better and faster decisions.



Enable a greater capability to link data together from different Districts, Functional Areas, and Systems.



Remove the barriers currently in place that prevent the efficient sharing of information.

ROADS Project Participation

EMPLOYEE SURVEYS

- √ 75 survey invitations
- √ 60 minutes to complete
- √ 70 questions
- ✓ 230+ responses

EMPLOYEE INTERVIEWS

- ✓ 2 hour interview durations
- √ 7 districts visited
- √ 24 interviews completed
- √ 270+ participants

ROADS Project Participation

Public Information Specialist · Procurement · Contracts Specialist · Surveys · Environmental Permits Engineer · CADD Manager · Program Services Manager · Legislative Analyst · Surveyor · Emergency Management · Assistant Secretary · Workstation Technician · District Drainage Engineer · Project Scheduler · GIS Coordinator · Traffic Operations · Maintenance · Personnel Records Supervisor · Pavement Systems · Network Administrator · Workstation Support · Material Operations Engineer · Planner · TSSO Network Support · Estimator · Legal Counsel · Modal Development · Work Program Development · EMO Engineer · ROW Scheduling · Facility Manager · Procurement Manager · Data Analyst · Financial Services Supervisor · Final Estimate

ENGAGING A WIDE VARIETY OF STAFF

Manager · Construction · Service Desk Lead · In-House Consulting Support · Safety and Health Office · State Materials · P-Card Administration · Personnel Officer · Safety Program Engineer · Performance Management and Training · Rail and Motor Carrier · BSSO District Liaison · Design · Transportation Support Manager · ITS · Design · RCI Coordinator · Project Management · Chief Information Officer · Specifications and Estimates · Contractual Services Administration · Operations Maintenance Manager · Structures Department · Environmental Management · Finance and Accounting · Research Center · Transit · General Counsel · Aviation and Spaceports · Urban Planning · ISD · System Planning GPC · Court Engineer · Pavement Systems · Chief Information Officer · District Secretary · Executive Assistant · Material Operations Engineer · Etc.

Recurring Themes



It is hard to know what data is available because information is organized around applications instead of around perspectives end users can relate to (e.g., business subject areas).



Data is hard to access because security controls are scattered across many different tools and processes (e.g., RACF, AARF, applications, SharePoint, etc.) throughout 170+ centralized and local systems.



Many districts are moving toward the adoption of the GIS system as the entry point for information searches, but the approach has not been standardized across the districts.



A majority of the district data efforts appear to focus on singular business issues without the added benefit of looking at the data from an overall business view to improve performance or reduce risk.



Teams consistently stated they would like a "one stop shop" to access all information they need in one place, with a "Google Type" Search. Over 40 "Search Criteria" elements have been identified.

Challenges Identified

Interviews and survey results revealed multiple challenges, such as:

A heavy reliance on getting data from individual(s) instead of accessing data directly from applications and reporting tools

A significant prevalence of manual, home grown processes for copying and transferring data (e.g., via excel spreadsheets)

The extensive amount of effort required to match up information from multiple data sources

^{*}additional challenges were provided in ROADS Project Deliverable 2

Gaps Identified

Data organization inconsistencies across SharePoint and local drives	Lack of consistent data controls	Data Steward Working Groups	Data Custodians	Lack of centralized management of extracts, transformations and load	Inadequate data extract tools	Duplicate data entry	System integration timing
Technical Group Gaps		Governance Gaps		Data Integration Gaps		Master Data Management Gaps	
Network bandwidth issues	Challenge of federated architecture and standards	Meeting and formal communications	Identification of decision- making processes	Issues completing nightly data downloads	Challenges in merging information from multiple sources	Inconsistent data entry rules	Unclear system data definition
ack of unified enterprise security procedures	Users don't know who to contact	Users don't know which process to follow	Engineering culture drives development	Clearly defined business and technical data roles	Need to refocus culture from collecting data to exploiting data	Meta data repository is difficult to access	Meta data repository is difficult to use
Security and Privacy Gaps		Char		ange Management Gaps		Meta Data Management Gaps	
Security approvers are verwhelmed by security requests	Security Administrators overwhelmed by manual labor intensive process	Lack of data classification	Challenges with trusting the data	Distrust of standardization process	Transition to modern data driven organization is just getting underway	Meta data repository does not have district related application data	Meta data repository does not have all required data elements
Lack of consistency of matching identifiers	Need for "one stop shop" for data	Lack of business perspective	Inconsistent data identifiers	Lack of historical data retention	Purpose driven meetings	Data Steward involvement/participation	Office cooperation
Data Strategy and Architecture Gaps		Analytics Gaps			Solution Management Gaps		os
Lack of industrial strength tools	Network bandwidth is constrained	Data confidence issues	Data interpretation issues	Lack of access to analysis tools and required data	Common goals	Prevention of copying	Solution coordination
Timely access to internal data	Timely access to external data	Data islands in Central and District Offices	Data islands in applications	Data isolation in offices and programs	Multiple sources and reports required to access data	Lack of ad hoc reporting	FDOT
Data Quality Gaps		Organizational Alignment Gaps		nt	Dashboards, Scorecards, and Reporting Gaps		FDOT Information
Lack of accurate and timely data entry	Re-work related to GIS data	Lack of effective master data management	Lack of effective innovation escalation process	Lack of effective enterprise change management process	Unclear on what reports to use and unsure where to obtain data	Integration of internal and	Gaps
			Lack of effective internal and external feedback quality loops				



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Solutions Identified

Implement Architecture

Move and Synchronize Data

Implement Solution Management

Address Bandwidth Issues

Enable Data Consistency and Accountability

Implement Change Management

Establish Data
Awareness

Institute Enhanced Reporting Capabilities

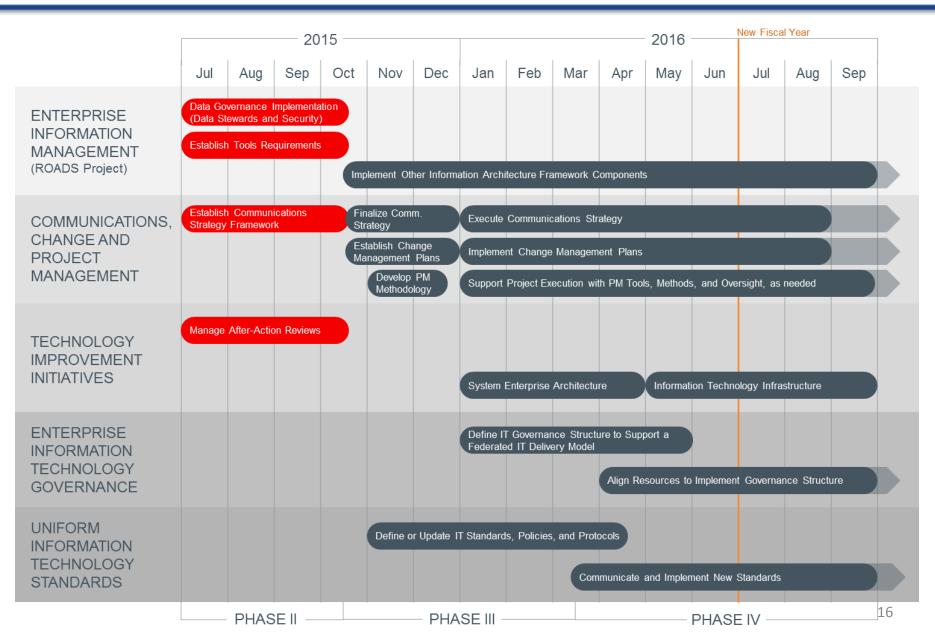
Implement Organizational Alignment

Streamline Data Security

Implement Data
Governance

IT Strategic Plan Timeline





ROADS Project Next Steps – Phase II

For Phase II we will be:



ADDRESSING BANDWIDTH ISSUES

Immediate Increase in Bandwidth and Submission of Legislative Budget Request (LBR)

- Funding was identified to increase bandwidth. FDOT users should begin to immediately see the affects.
- LBR will be included in the Department's proposed budget for the upcoming legislative session
- Will increase annual funding for additional bandwidth across FDOT (all districts and central office)

ROADS Project Next Steps – Phase II

For Phase II we will be:



ADDRESSING BANDWIDTH ISSUES



IDENTIFYING DATA STEWARDS AND CUSTODIANS

Data Steward: Business users with expert knowledge of business processes, how data is used within those processes, and typically the "go to" person within their business group for all data related questions.

Data Custodian: Focus on the underlying infrastructure (technical environment, databases, etc.) and activities required to keep the data intact and available to users.

- Statewide identification of Data Stewards is underway
- Working sessions to set up structures and processes

ROADS Project Next Steps – Phase II

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ADDRESSING BANDWIDTH ISSUES



IDENTIFYING DATA STEWARDS AND CUSTODIANS



DEVELOPING REQUIREMENTS FOR TOOLS

- Determining needs throughout the districts and central office for tools that would be procured
 - For example, reporting tools
- Take steps to begin procuring the tools to implement identified solutions

ROADS Project Impact on FDOT

Short-Term Impact

- Staff will participate in district and central office interviews to identify stewards and aid in shaping the tool requirements
- Identified data stewards and custodians will actively be a part of the new data governance team
- Staff will notice improved speed of the network
- Increased and improved interaction between all offices (district and central)

Long-Term Impact

- Streamline information to enable better, faster decisions
- Remove barriers currently in place that prevent efficient sharing of information
- Phased roll-out over the next few years with notable changes along the way
- Potentially lead to data only being entered into one application instead of multiple
- Lead to assessing the ability to phase-out certain redundant applications
- Improve data reliability and simplify data sharing across FDOT

IT Improvement Initiatives

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Communications Program, Organizational Change Management, and Project Management

IT Improvement Initiatives

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IT Improvement Next Steps – Phase II

For Phase II we will be:



Conducting After-Action Reviews

After-Action Reviews: Completing comprehensive assessments on projects undertaken by OIS in the past to determine characteristics about what went well and where there are opportunities for improvement.

- Identify a sampling of IT projects
- Travel to the Central Office and Districts to interview stakeholders and gain valuable feedback
- Compile an assessment of findings and provide high-level recommendations

Communications

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Communications, Organizational Change Management, and Project Management

methods and tools

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Communications Next Steps – Phase II

For Phase II we will be:



Developing Communications Strategy Framework

Communications Strategy Framework: Guidelines that will outline processes and methods for effective communications by OIS within the Department including roles, responsibilities, plans, etc.

- Determine the current 'As-Is' state of communications with OIS
- Perform a stakeholder analysis internal and external to the Department
- Develop a communications matrix
- Conduct an initial review of current communications policies and templates

Thank You

THANK YOU FOR ATTENDING THE FLORIDA TRANSPORTATION DATA SYMPOSIUM

April C. Blackburn

Chief Information Officer april.blackburn@dot.state.fl.us